AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently amended) A method for implementing router interface backup with Virtual Router Redundancy Protocol (VRRP), comprising the steps of:

(1) connecting multiple interfaces of a router ~~or routers~~ to a single ~~the same~~ LAN and adding the interfaces to ~~the same~~ a single multicast group;

~~(2)~~ configuring ~~the same~~ a single virtual router number and a single virtual IP address to said interfaces to make said interfaces join ~~the same~~ a single virtual router;

~~(3)~~ selecting ~~the~~ a main interface and backup interfaces according to their respective priorities among said interfaces; and

~~(4)~~ sending VRRP multicast packets from the main interface to all backup interfaces periodically; wherein if ~~the~~ a priority involved in ~~the~~ a just received VRRP multicast packet is zero or the backup interfaces have not received any VRRP multicast packet within a predetermined period, one backup interface ~~becoming~~ becomes the main interface and ~~replacing~~ replaces the original main interface.

2. (Currently amended) The method of Claim1, wherein said ~~step of~~ selecting ~~the~~ a main interface and backup interfaces comprises the steps of:

~~(1)~~ an interface directly becoming a backup interface when initiated; and becoming the main interface if it has not received any VRRP multicast packet within a period;

~~(2)~~ if the virtual IP address of the interface is identical with its real IP address, the interface directly becoming the main interface after initiated, and being configured with the maximum priority automatically; and

(3) if multiple interfaces become main interfaces simultaneously, each interface comparing the priority involved in the received VRRP packet with its own priority; and if the priority involved in the received VRRP packet is higher than its own priority, the interface becoming a backup interface.

3. (Currently amended) The method of Claim 1, wherein the step of said one backup interface becoming the main interface and replacing the original main interface comprises the step of further comprising:

judging whether the priority involved in the VRRP packet received by a the backup interface is higher than the priority configured to the backup interface and, if so the priority involved in the VRRP packet received by a backup interface is higher than the priority configured to the backup interface, keeping the state of the backup interface unchanged; if the priority involved in the VRRP packet received by a backup interface is not higher than the priority configured to the backup interface otherwise, making the backup interface become the main interface.

4. (New) The method of Claim 1, further comprising the step of:

connecting multiple interfaces of at least one further router to the single LAN and adding the interfaces of the router or each further router to the single multicast group.

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